

Claims:

1. A positioning device (1) for an X-ray detector (11) or an X-ray source (23), having an arched arm (15) in which the X-ray detector (11) or the X-ray source (23) can be supported displaceably in the direction of the arch, and having a base (9) in which the arched arm (15) is supported displaceably in the direction of the arch.

2. The positioning device (1) as defined by claim 1, wherein the arched arm (15) is supported displaceably in the direction of the arch in a second arched arm (13); and wherein the second arched arm (13) is supported displaceably in the direction of the arch in the base (9).

3. The positioning device (1) as defined by one of the foregoing claims, wherein the X-ray detector (11) or the X-ray source (23) can be supported movably in the arched arm (15) in the radial direction relative to the arch.

4. A patient-supporting device (5, 7), which has a positioning device (1) as defined by one of the foregoing claims.

5. The patient-supporting device (5, 7) as defined by claim 4, having a patient-supporting table (5), wherein the positioning device (1) is located underneath the patient-supporting table (5).

6. An X-ray machine (21), which has a patient-supporting device (5, 7) as defined by one of claims 4 or 5 and an X-ray source (23), supported movably in all directions in space and located separately from the positioning device (1).

7. The X-ray machine (21) as defined by claim 6, which has a control unit (27), which is connected to the X-ray source (23) and the positioning device (1) and which is embodied so as to move the X-ray source (23) and the positioning device (1) in a manner adapted to one another, so that they assume a predetermined orientation to one another.

8. An X-ray machine (21), which has a patient-supporting device (5, 7) as defined by one of claims 4 or 5 and an X-ray detector (11), supported movably in all directions in space and located separately from the positioning device (1).

9. The X-ray machine (21) as defined by claim 8, which has a control unit (27), which is connected to the X-ray detector (11) and the positioning device (1) and which is embodied so as to move the X-ray detector (11) and the positioning device (1) in a manner adapted to one another, so that they assume a predetermined orientation to one another.

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